

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently amended) A method of increasing for inducing somatic-cell homologous recombination between a gene and a DNA sequence similar to the gene in a eukaryotic somatic cell wherein the homologous recombination is occurring at a genetic locus, characterized by being a method for inducing somatic-cell homologous recombination in eukaryotic-organism cells

~~wherein the DNA homologous recombination is occurring at an arbitrary genetic locus, and~~

~~wherein, by controlling the transcription of said gene by placing the DNA sequence is upstream on the 5' side of the gene;~~

~~wherein a transcription promoter is located downstream on the 3' side of the DNA sequence for controlling the transcription of a the gene at said the genetic locus ; and on the downstream 3' side of a base sequence similar to the base sequence of said gene, being action-capably adjacent to said gene;~~

~~the method comprising a step of controlling of transcription of the gene induces DNA homologous recombination between the base sequence of said gene and a base sequence similar to said the DNA sequence gene is induced.~~

2. (Currently amended) ~~A~~ The method recited in- of Claim claim 1, characterized in that the aforementioned cells wherein the cell is are a DT40 cell cells.

3. (Cancelled)

4. (Currently amended) ~~A-~~ The method recited of Claim claim 1, wherein the controlling transcription involves characterized in that a cis-acting region for the aforementioned transcription control contains comprising either one or both of an enhancer; and a nuclear matrix attachment region (MAR) or both.

5. (Currently amended) ~~A~~ The method of recited Claim claim 1, characterized in that, when the aforementioned wherein the gene and the DNA a base sequence similar to the aforementioned gene are exogenous, comprising the following steps are included:

(a) ~~orienting a step wherein the order on a vector of the base sequence similar to said gene, a transcription promoter, and said gene, are, beginning from the 5' side, in the order: base sequence similar to said the DNA sequence gene, the~~ transcription promoter, ~~and said the gene at the 3' side;~~

~~wherein and said the~~ transcription promoter is inserted in a manner so as to be capable of ~~controlling acting on said the~~ gene;

(b) ~~introducing the a step wherein said vector is introduced into a cell; and a base sequence similar to said gene, a transcription promoter, and said gene is incorporated~~

(c) ~~incorporating the DNA sequence, the transcription promoter, and the gene into onto a~~ chromosome.

6. (Currently amended) ~~The A method recited in of Claim claim 5, characterized in that either one or both of an wherein the enhancer or the and a nuclear matrix attachment region (MAR) or both, are inserted onto into the aforementioned vector in a manner so as to be capable of acting on affecting the action of the aforementioned transcription promoter.~~

7. (Currently amended) ~~A The method recited in Claim of claim 5, wherein characterized in that the aforementioned transcription promoter is an inducible promoter.~~

8. (Currently amended) ~~A The method recited in Claim of claim 7, wherein characterized in that the aforementioned inducible promoter is a tetracycline inducible promoter.~~

9. (Currently amended) ~~A The method recited in Claim of claim 5, wherein characterized in that the aforementioned gene is an enhanced cyan fluorescent protein (ECFP) gene.~~

10. (Currently amended) ~~A The method recited in Claim of claim 5, characterized in that wherein the DNA sequence comprising the a base sequence similar to the aforementioned gene is an enhanced green fluorescent protein (EGFP) genetic sequence.~~

11. (Currently amended) ~~A The method recited in Claim of claim 4, wherein characterized in that the aforementioned enhancer is a chicken antibody light chain gene enhancer (3' enhancer), and the aforementioned nuclear matrix attachment region (MAR) is chicken-derived.~~

12. (Currently amended) A cell, wherein DNA homologous recombination has been enhanced ~~induced by a~~ according to the method recited in Claim of claim 1.

13. (Currently amended) A recombinant gene produced by for which increased homologous recombination ~~has been induced by a~~ according to the method recited in Claim of claim 1.

14. (Withdrawn) ~~A protein encoded by a gene for which homologous recombination has been induced recited in Claim 13~~ The recombinant gene of claim 13, wherein the recombinant gene encodes a protein.

15. (Currently amended) A vector comprising wherein a gene; ~~that induces homologous recombination and a transcription promoter for controlling transcription of said the gene are placed;~~ and a DNA a-base sequence similar to the said gene is placed in a region,

wherein the DNA sequence is upstream on the 5' side of said the transcription promoter, and

wherein orienting on the vector beginning from the 5' side, the DNA sequence, the transcription promoter, and the gene at the 3' side on the vector induces constructed in order to induce homologous recombination between of said the gene and the DNA sequence.

16. (Currently amended) The A vector recited in of claim Claim 15, wherein one or both of an enhancer and a nuclear matrix attachment region (MAR) are further inserted into the vector affecting the action of the transcription promoter in a manner so as to be capable of acting.

17. (Currently amended) The A method recited in of claim Claim 1, characterized in that wherein the aforementioned transcription promoter is an inducible promoter.

18. (Currently amended) The A method recited in of claim Claim 17, characterized in that wherein the aforementioned inducible promoter is a tetracycline inducible promoter.

19. (Currently amended) The A method recited in of claim Claim 1, characterized in that wherein the aforementioned gene is an enhanced cyan fluorescent protein (ECFP) gene.

20. (Currently amended) The A method recited in of claim Claim 1, characterized in that wherein the DNA sequence similar to the ~~aforementioned~~ gene is an enhanced green fluorescent protein (EGFP) genetic sequence.

21. (Currently amended) The A method recited in of claim Claim 6, characterized in that wherein the ~~aforementioned~~ enhancer is a chicken antibody light chain gene enhancer (3' enhancer), and the ~~aforementioned~~ nuclear matrix attachment region (MAR) is chicken-derived.

22. (Currently amended) The A method recited in of claim Claim 4, characterized in that wherein the cell is a ~~aforementioned-cells~~ are DT40 cell cells.

23. (Currently amended) The A method recited in of claim Claim 5, characterized in that wherein the cell is a ~~aforementioned-cells~~ are DT40 cell cells.

24. (Currently amended) A cell₁ wherein ~~DNA~~ homologous recombination has been increased induced according to the by-a method recited in of claim Claim 4.

25. (Currently amended) A cell₁ wherein ~~DNA~~ homologous recombination has been increased induced according to the by-a method recited in of claim Claim 5.